

WO 01/75572

PCT/GB01/01444

53

Claims

1. A manually operable input apparatus for a portable electronic processing device, defining a plurality of regions each representing a
5 respective data item, said manually operable input apparatus comprising a plurality of sheets configured to produce a response to a mechanical interaction,

wherein said sheets are configured to be wrapped around said device to provide a protective cover.

10

2. Apparatus according to claim 1, wherein said input apparatus is a keyboard.

15

3. Apparatus according to claims 1 or 2, wherein said processing device is a hand-held computer, a mobile telephone or portable audio equipment.

20

4. Apparatus according to any of claims 1 to 3, wherein said apparatus is connected to said electronic processor device by a connection means.

25

5. Apparatus according to claim 4, wherein said connection means further comprises an interface circuit configured to apply voltages to one or more of said sheets and to convey positional data to said electronic processing device.

WO 01/75572

PCT/GB01/01444

54

6. Apparatus according to claim 7, wherein said electronic processing device is programmed to correlate said positional information with look up tables for converting positional information received from said interface circuit into a presentation in the form of alpha numeric text.

5

7. Apparatus according to any of claims 4 to 6, wherein said connections means is configured so as to retain said electronic processing device connected thereto during the bending operations.

10

8. A manually operable input apparatus according to any of claims 4 to 7 and a portable electronic processing device in combination, wherein said connection means connecting said apparatus to said processing device is foldable to allow said processing device and said apparatus to be mutually arranged in an operational configuration in which said processing device is supported in a position spaced apart from said input apparatus, and to be reconfigured to a wrapped configuration, in which said device is enveloped by said input apparatus, by the steps of

15

folding said connecting means about a first axis to an intermediate position in which said processor device is received on a surface said apparatus, and

20

bending said apparatus about a second and a third axis, non-parallel with said first axis.

25

9. A manually operable input apparatus and a portable electronic processing device in combination as claimed in claim 8, wherein said

WO 01/75572

PCT/GB01/01444

55

processor remains connected to said connection means during said folding operations.

10. A manually operable input apparatus and a portable electronic
5 processing device in combination as claimed in claim 8 or 9, wherein said second and third axis are disposed in a substantially parallel relationship to one another.

11. A manually operable input apparatus and a portable electronic
10 processing device in combination as claimed in any of claims 8 to 10, wherein said second and said third bending axis divide the detector into a central portion, a first lateral substantially planar portion and a second lateral substantially planar portion.

12. A manually operable input apparatus and a portable electronic
15 processing device in combination as claimed in claim 11, wherein, in the intermediate position, said electronic processor device is received by said central portion and said first lateral portion bends about a first edge of said electronic processor along said second axis and said second portion
20 extends about a second edge of said electronic processor along said third axis to form said wrapped configuration.

13. A manually operable input apparatus and a portable electronic
25 processing device in combination as claimed in claim 12, wherein said first and second lateral portion of said apparatus are secured in the wrapped configuration by a securing means.

WO 01/75572

PCT/GB01/01444

56

14. A manually operable input apparatus and a portable electronic processing device in combination as claimed in claim 13, wherein said securing means is a loop and hook arrangement such as Velcro.

5

15. A manually operable input apparatus and a portable electronic processing device in combination as claimed in any of claim 8 to 14, wherein, in said intermediate position, said processor is operable independently of said input apparatus.

10

16. A manually operable input apparatus and a portable electronic processing device in combination as claimed in any of claims 11 to 15, wherein said device is supported on a self-erecting support mechanism in said operational configuration.

15

17. A manually operable input apparatus and a portable electronic processing device in combination as claimed in claim 16, wherein said mechanism comprises a flexible fabric cable having electrical connection elements contained therein and sections of a supporting plastic.

20

18. A manually operable input apparatus and a portable electronic processing device in combination as claimed in claim 17, wherein said sections of supporting plastic are hinged to facilitate self-erection of said support.

25

05000236 120001

WO 01/75572

PCT/GB01/01444

57

19. A manually operable input apparatus and a portable electronic processing device in combination as claimed in claim 18, wherein said sections of plastic hinge about said plastic cable.

5 20. A manually operable input apparatus according to any of claims 1 to 7 and a portable electronic processing device in combination, wherein said apparatus is permanently attached to an edge of said processor device and configured to allow mutual arrangement in an operable configuration, in which the input apparatus extends from said
10 edge of said processor, and reconfiguration into a wrapped configuration in which said input apparatus is wrapped around said processor device.

21. A manually operable input apparatus and a portable electronic processing device in combination as claimed in any of claims 2 to 25,
15 wherein said input apparatus is constructed from fabric.

22. A manually operable input apparatus and a portable electronic processing device in combination as claimed in any of claims 2 to 25, wherein said input apparatus comprises a membrane keyboard.
20

23. A manually operable input apparatus and a portable electronic processing device in combination as claimed in any of claims 2 to 25, wherein said keyboard surface is configured so as to facilitate the bending of the keyboard.
25

09980236-122004

WO 01/75572

PCT/GB01/01444

58

24. A manually operable input apparatus for a portable electronic processing device, defining a plurality of regions each representing a respective data item, said manually operable input apparatus comprising a at least one fabric sheet and at least one membrane sheet, said sheets
5 being configured so as to produce an output in response to a mechanical interaction,

wherein said sheets are configured to be wrapped around said device to provide a protective cover.

09380636 1.000000